DEPARTMENT OF PUBLIC WORKS SMALL CELL DEVELOPMENT AND DESIGN GUIDELINES – STREETLIGHT

The City of Hayward seeks to permit wireless carriers to install small cell wireless communications facilities, within the public right-of-way, in order to provide robust cellular coverage and capacity throughout the City, while ensuring facilities are well-maintained and do not significantly detract from City streetscapes. These guidelines are in accordance with the City of Hayward's Municipal Code (HMC). The HMC takes precedence in any case. The City Engineer may change or amend these guidelines as needed.

Pole Selection

1. Where a new collocated small cell wireless communications facility (Facility) is necessary, the Facility must be installed on existing standard steel streetlight poles. New poles will not be permitted except to replace existing poles.
2. Installation of a Facility is less preferred in front of schools, or in residential and historical areas or districts. Installation should avoid pole locations where:
    a. Streetlight poles are non-standard, decorative, or post top style.
    b. Streetlight poles are in front, and within 100 feet horizontal distance, of architecturally significant features, or in locations causing visual impacts of significance.
    c. Poles are reserved for City use. Contact City permit review staff for more information. d. Poles are for traffic signal purposes or have existing electronic or communications devices.
    d. Poles, appurtenances or Facility are in close proximity to existing overhead utilities. Poles, appurtenances and the Facility must have 10 feet of clearance from high voltage minimum and exceed the minimum separation from overhead utilities required by CPUC General Order 95.
3. Poles showing signs of damage or corrosion must be replaced with Caltrans Type 15.
4. New foundations are required when replacement of streetlight poles is necessary.
5. Luminaires on existing poles to be replaced must be re-installed with a luminaire approved by the City.
6. Pole number labels, if incorrect or missing, must be corrected.
7. Poles with previously permitted telecommunications facilities require a new permit application for additional equipment.

Facility, Equipment, Wiring and Cabling

8. Except for wiring and cabling, the Facility shall be located entirely on the pole with equipment located on top of the pole within the antenna shroud including the PG&E smart meter.
9. Ground level installations are not permitted.
10. The Facility is limited to a maximum of 4 added equipment enclosures per pole including antenna shroud, 2 radio enclosures, PG&E disconnect switch.
    a. All enclosures shall be in a vertical linear arrangement on one side of the pole.
    b. Equipment must have long narrow profiles that avoid wide offsets from the pole.
    c. PG&E disconnect switch 8 feet minimum and 10 feet maximum above grade.
    d. Dimensions of each equipment enclosure must be less than 18”x9”x6”, except the pole top mounted enclosure must be less than 40”x11” diameter.
11. Equipment for a Facility must be the least intrusive possible with regard to appearance, size, and location. If installations are available (e.g., have been installed in other jurisdictions) that are less intrusive than those allowed by the City’s telecommunications ordinance, applicants must use those installations unless the City Engineer determines that those installations are not feasible.
12. The Facility must not cause severe negative visual impact as determined by the City.
    a. Enclosures must be mounted behind signs to minimize visual impact.
13. The Facility must not interfere with City operations, e.g. sign and signal visibility.
14. The Facility must be designed in accordance with the requirements for streetlight facilities and appurtenances including: hardware, corrosion protection, signs, labels and matching finish.
15. Fans should not be utilized. An acoustical study is required for Facilities that generate noise levels exceeding the maximum as per HMC Section 4-1.03.4.
16. The Facility may not have generators or generator sockets.
17. The antenna shroud, if applicable, must not impinge on removal of the mast arm.
18. The Facility must have all wiring, cabling, and conduit concealed from the public view, e.g. underground or within the pole.
19. Wiring and cabling for the Facility must be labeled in the pole hand hole and all pull boxes with the company name and function, e.g. “AT&T COMM”, and “AT&T POWER”.
20. The Facility power must be connected to a PG&E smart meter.
21. The Facility must include signage that accurately identifies the Facility owner/operator, the owner/operator’s site name or identification number and a toll-free number to the owner/operator’s network operations center. Facility may not bear any other signage, flashing lights, or advertisements unless expressly approved by the City, required by law or recommended under existing and future FCC or other United States governmental agencies for compliance with RF emissions regulations. RF notification signs must be placed where appropriate, with at least one occupational notice facing the street on the pole below and within 12 inches of the bottom of the antenna shroud.
22. The Facility, modifications to existing infrastructure, modified existing infrastructure or replacements thereof, and existing circuits and service cabinets that connect the Facility, must

comply with all requirements, codes and regulations including City specifications and details, California Electrical Code, PG&E and FCC.

23. Circuit tracing must be completed using proper circuit tracing equipment.
24. A pull box must exist or be installed at the base of the pole. Connection for wireless power must be made in the pull box at the base of the pole.
    a. New pull box to be City type, size #3.5 minimum.
25. Streetlight control systems without continuous power at the base of the pole must be modified. These systems are typically either photocells integrated in the luminaires, or a photocell-controlled contactor in a service cabinet. Streetlight systems controlled with contactors must install photocells on each luminaire and modify or replace the service cabinet. A new luminaire is necessary wherever an existing luminaire does not have a NEMA twist-lock photocell receptacle.
26. Plans must use City border and format
27. Plans must be prepared in a consistent and professional manner that eliminates or minimizes redundant information.
28. Plans must include cover sheet, site survey sheet, proposed plan view, detailed plan view, existing and proposed elevations, and details of wireless notices, signage, equipment, enclosures, foundations, wiring diagram, cabling diagram, splicing and fusing diagram, lighting circuit diagram, load and voltage drop calculation results, streetlight control system modifications, service pedestal modifications, and a list of materials.
29. Plans must provide a design and specification of how all parts are mounted, attached and supported.
30. Plans must show future work where such work facilitates the proposed improvements.
31. Plans must show underground trunk line connections, if any, for the permitted work.

Permit

32. Executed Master License Agreement, Pre-application Conference, master plan, site review and screening, pre-approval of pole locations, and understanding MC must be completed prior to submitting applications.
33. Pre-approval of pole locations must be requested in batches of up to 5 locations.
    a. Each pole location must be identified by pole badge number, street address, and latitude and longitude (WGS 84 datum).
    b. No more than 20 pole locations may be pre-approved at one time.
    c. City must have a minimum of 10 working days to review and provide pre-approval.
    d. The City may terminate pre-approval, in writing, if the wireless company fails to submit a complete application within 120 calendar days of pre-approval.
34. Each Permit application must be limited to up to 5 locations per batch, with locations batched with similar designs, e.g. new poles and foundations, or connected to the same service.
35. Permit application must include Wireless Facility Encroachment Permit form, Permit Application Processing Fee, plans, Structural Analysis, Electrical Analysis, Radio Frequency (RF)—Electromagnetic Energy Compliance Report, Performance Bond, master plan of facilities in public Right of Way,

Temporary Traffic Control Plan, contact info, Small cell Checklist - Streetlight, proof of FCC license, forms filed with the FCC or CPUC, and insurance certificate. Include one copy and one electronic copy in PDF format unless noted otherwise.

36. Structural Analysis must be per 2016 California Building Code and AASHTO LTS-6 Standard Specifications for Structural Supports for Highway Sign, Luminaires, and Traffic Signals. Analysis must evaluate the pole, pole foundation, pole modifications e.g. wielding, and mounting of equipment. The Structural Analysis must be signed and stamped by a CA Registered Structural Engineer.
37. Electrical Analysis must be performed by a CA Registered Electrical Engineer to evaluate loading level and voltage drop and provide for a reserve of 40% of circuit load capacity for City's future use. 38. All calculations and analysis must include allowances for all current equipment and future equipment considered by the wireless company.
38. Permit submittal meetings must be scheduled and attended.
39. Re-submittal of permit applications must include written response, in an Excel file and hardcopy, to all comments in addition to all revised documents required for a permit submittal.
40. Applicant must secure their own communication/backhaul arrangements independent of City facilities. A separate utility permit is required for such work.

Public Notification

41. Upon City approval of site location and prior to permit submittal, applicant must mail informational notices to residents, businesses, schools, and property owners within 300 feet.
    a. Notices to include clear description of the scope of work, site photos, maps, rendering of proposed equipment in photograph of the pole and nearby area, property map, and applicant contact info.
42. Notified recipients must be given 20 calendar days to contact the applicant with their concerns and questions.
43. Applicant must respond to concerns and questions to address and resolve any issues prior to permit application submittal.
44. Public notification information, proof of notification and list of property owners within 300 feet must be submitted with permit application.

Construction Requirements

45. Notification after issuance of permit and prior to construction:
    a. Applicant must distribute written notice to property owners, residents, businesses, and schools three days prior to start of construction. Notices must include the project name, describe the nature and duration of the construction operations, and provide a telephone number in which the applicant or the designated representative may be contacted.
    b. If construction operations are delayed for any reason beyond the duration stipulated in the notices, or the phasing of work includes dormant periods greater than 1-month, the applicant must re-issue written notices three days prior to returning to construction.

c. A copy of the written notices and a map showing the notice distribution area must be submitted to the Public Works inspector listed on the permit.

46. During construction, poles that are found to be damaged or to have corrosion must be replaced. Plans must be revised and resubmitted showing replacement of the pole and foundation.
47. Temporary traffic control plans must be submitted for review by the Public Works inspector after permit issuance and prior to the start of construction.
48. Permitted work must pass inspection.
49. All currently observed moratoriums will be applicable (e.g. paving, holiday construction, etc.)

Records

50. Provide all records required per Master License Agreement.
51. Permittee must keep records of construction and submit them at completion of construction, e.g. As-Built plans and photographs of completed work.
52. Place a copy of the streetlight circuit diagram As-Built in the service cabinet.